

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Final Rule To Determine the Sonora Chub To Be a Threatened Species and To Determine Its Critical Habitat

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines a fish, the Sonora chub (*Gila ditaenia*), to be a threatened species and determines its critical habitat under the authority contained in the Endangered Species Act of 1973, as amended. A special rule allowing take in accordance with applicable Arizona State laws and regulations is also included. The Sonora chub occurs in Santa Cruz County, Arizona, and in Sonora, Mexico. It is threatened by the possible introduction of exotic fishes and their parasites into its habitat, and by potential mining activities. It is particularly vulnerable to these threats because of its very limited range, and because of the intermittent nature of the stream. This rule implements Federal protection provided by the Endangered Species Act of 1973, as amended, for the Sonora chub.

DATES: The effective date of this rule is May 30, 1986.

ADDRESSES: The complete file for this rule is available for inspection during normal hours, by appointment, at the Region 2 Office of Endangered Species, U.S. Fish and Wildlife Service, 500 Gold Avenue, SW., Room 4000, Albuquerque, New Mexico 87103.

FOR FURTHER INFORMATION CONTACT: Mr. Gerald Burton, Endangered Species Biologist, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766-3972 or FTS 474-3972).

SUPPLEMENTARY INFORMATION:**Background**

The Sonora chub was first collected by E.A. Mearns in 1893 from Sycamore Creek, Arizona. It was described from fish collected by R.G. Miller (1945) from the Rio Magdalena near the town of La Casita in Sonora, Mexico. This fish is a member of the minnow family and is

generally less than 125 millimeters (5 inches) in total length. It is a moderately chubby, dark colored fish, with two prominent black lateral bands on the sides and a dark oval spot at the base of the tail. In breeding males, a red coloration develops at the bases of the lower fins and some orange coloration is present on the belly. The Sonora chub is primarily a pool dweller, but is highly secretive and little is known of its behavior and habitat preferences (Minckley, 1973).

In the United States, the Sonora chub occurs in Sycamore Canyon in Sycamore Creek proper, Yank's Spring, and in two of its tributaries, located on the Coronado National Forest northwest of Nogales, Santa Cruz County, Arizona. The tributaries include the lower 1.25 stream miles (sm) of Penasco Creek, and the lower .25 sm of an unnamed stream in an unnamed canyon that enters Sycamore Canyon from the west in the NW ¼ of Section 23, T. 23 S., R. 11 E. (Bell, 1984). Yank's Spring is a perennial spring which has been impounded in a concrete tank for many years. Sycamore Creek starts to flow about .5 mile below Yank's Spring and flows downstream 3.7 miles (USDA, 1982) in a series of pools and small riffles over a bedrock and rubble substrate. It is intermittent during part of the year, at which time it is a series of pools of varying depth (L. Miller, 1949; Brooks, 1982). When intermittent, pools are maintained in shaded areas against cut banks or the canyon walls by underground flow (Minckley, 1973). During years of heavy rainfall, water does reach to the International Border, some 5 miles downstream from Yank's Spring, at which time the Sonora chub presumably extends its range to that boundary, if not beyond. Pensaco Creek is a west-flowing tributary to Sycamore Creek. It drains a large portion of the east side of the Sycamore Creek watershed, but has only intermittent flow. The chub is found in the lower 1.25 sm of the creek in pools in bedrock or pools maintained by underground flow (Bell, 1984). The unnamed stream channel supports three perennial bedrock pools in the .25 sm just above its confluence with Sycamore Creek. The lower two pools support large numbers of Sonora chubs (Bell, 1984).

Available life history information is limited to food habit observations based on a few individuals and to spawning observations based on the presence of young in various collections (Minckley, 1973). Information on the riparian habitat is provided in earlier works by R.G. Miller (1945), L. Miller (1949), and Goodding (1961). Recent water quality

and habitat information is presented by Brooks (1982) in a brief characterization of the physio-chemical features of Sycamore Creek. This information is summarized in the 1983 status report on *Gila ditaenia* (Minckley, 1983).

Current threats to the United States population include the stocking of exotic fishes and their associated parasites, and possible uranium mining activities.

In the State of Sonora, Mexico, this fish is known from very few localities, and nothing is known about its biology. The 1940 type locality was the Rio Magdalena near La Casita, Sonora, Mexico. At that time the Rio Magdalena was a clear stream 4 to 5 feet wide, about 1 foot deep, and with a fairly swift current over a bottom of sand and gravel. The principal vegetation was watercress, found in backwaters along the stream (R.G. Miller, 1945). It is not known if habitat for *Gila ditaenia* still exists at this location, or if so, its condition. *Gila ditaenia* has been collected as recently as 1981 from the Rio Magdalena drainage at Campo Carretero and Cienega La Atascosa (D. Hendrickson, Arizona State University, pers. comm., 1983; and in press). These collections indicate the possibility of hybridization between *Gila ditaenia* and *Gila purpurea*, the Yaqui chub, in at least one locality.

In November 1982, the U.S. Fish and Wildlife Service contracted Mr. C.O. Minckley to prepare a report on the status of *Gila ditaenia*. Minckley recommended threatened status with critical habitat because of threats to the species from the introduction of exotic fishes and their associated parasites, and potential mining activities; and the fact that this fish occurs in a very limited area in Arizona and has an uncertain status in Mexico.

Gila ditaenia was included on the Service's December 30, 1982, Vertebrate Notice of Review (47 FR 58454) in category 2. Category 2 includes those taxa that are thought to possibly warrant listing as threatened or endangered, but for which more information is needed to determine the status of the species and to support listing. That information is now available for *Gila ditaenia* in a status report (Minckley, 1983). On June 6, 1984, the Service published a proposed rule to determine *Gila ditaenia* to be a threatened species with critical habitat (49 FR 23402).

Gila ditaenia is listed by the State of Arizona as a threatened species, Group 3 (Arizona Game and Fish Commission, 1982), which comprises those species "... whose continued presence in Arizona could be in jeopardy in the foreseeable future."

Summary of Comments and Recommendations

In the June 6, 1984, proposed rule (49 FR 23402) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice was published in the *The Nogales Herald* in Nogales, Arizona, on July 3, 1984, that invited general public comment. Nine comments, all in support of the proposal, were received and are discussed below. No public hearing was requested or held.

The U.S. Forest Service supported the listing of *Gila ditaenia* as threatened and the designation of critical habitat. However, it recommended that the lower 1.25 sm of Penasco Creek, a small tributary of Sycamore Creek, be added to the critical habitat. It also requested that a recovery team be appointed as soon as possible. In light of additional biological information furnished by the Forest Service, the Fish and Wildlife Service agrees that Penasco Creek should be added to the designated critical habitat. This has been done in this final rule.

Letters in support of the listing and designation of critical habitat were received from the Arizona Game and Fish Department, the Board of Supervisors of Santa Cruz County, the International Union for Conservation of Nature and Natural Resources (IUCN), the Yuma Audubon Society, the American Society of Ichthyologists and Herpetologists, the Desert Fishes Council, and C.O. Minckley. In addition, the IUCN stated that it will include this species in the forthcoming edition of the IUCN Fish Red Data Book, probably in the vulnerable category.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that the Sonora chub should be classified as a threatened species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to implement the listing provisions of the Act (codified at 50 CFR Part 224) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their

application to the Sonora chub are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Known present and historic range of *Gila ditaenia* in the United States consists of Sycamore Creek, Yank's Spring, the lower 1.25 sm of Penasco Creek, and the lower .25 sm of an unnamed tributary stream entering Sycamore Creek from the west. All are located on the Coronado National Forest in Santa Cruz County, Arizona. Its very limited distribution makes this fish quite susceptible to any habitat disturbances, especially during periods when the stream flow is intermittent. Habitat disturbances that could be detrimental to the species are increased siltation and runoff subsequent to mining or other activities, depletion of the stream flow, and the introduction of manmade pollutants into the stream. It is quite possible that this species could be extirpated throughout its small U.S. range in a relatively short time by such habitat damage and loss (Minckley, 1983).

Sycamore Canyon at present remains in a basically unaltered state, and present impacts of human activities in the area are relatively minor. A portion of Sycamore Creek (4.75 sm), Penasco Creek, and an unnamed tributary of Sycamore Creek are contained within the Pajarito Wilderness Area. The remaining 1.5 sm of Sycamore Creek and the lower portion of the unnamed tributary containing the Sonora chub are also contained within the Goodding Research Natural Area, which is a special use designation of the U.S. Forest Service. This area is withdrawn from mineral entry and is closed to grazing. Recreation is limited to non-developed and dispersed uses. The canyons that contain critical habitat, however, do receive heavy visitor use. Yank's Spring is the site of a trailhead parking lot for visitors, but the spring has been impounded in a concrete tank for many years and is resistant to habitat damage.

In addition to the Sonora chub, Sycamore Canyon supports several rare and unique plant and animal species. One of these, the Tarahumara frog, which is a candidate for Federal listing, experienced a catastrophic die-off in Sycamore Canyon in 1974 and has not been found there since. The factors causing its disappearance are not fully known.

At present no mining is occurring anywhere within the Sycamore Creek watershed and none is expected in the near future (R.B. Tippecanoe, U.S. Forest Service, pers. comm., 1983);

however, active mining is ongoing in California Gulch, just one watershed to the west. Exploration for uranium occurred in 1981 on the upper eastern slopes of the Sycamore drainage on mining claims occupying approximately 4 to 5 square miles. Uranium was found and the claims are being maintained; however, no active mining is presently planned there. The Sycamore Creek drainage contains valuable minerals, and the development of mining activity within the watershed would have the potential for severe adverse effects on *Gila ditaenia* through such activities as increased water demand and withdrawal, habitat disturbance, siltation, and pollution.

Although the canyon is included in a livestock grazing allotment, there is little direct effect on the Sonora chub habitat, due in part to steep, rocky streambank topography. Indirect effects of grazing, such as erosion and siltation, are minor at present, but could have significant effects on the Sonora chub habitat if grazing were increased.

Very little is known about the habitat of *Gila ditaenia* in Mexico. Hendrickson (Arizona State University, pers. comm., 1983) noted that the habitat near Cienega La Atascosa was in good condition in 1981; however, there is no protection for habitat or species in Mexico and the current or proposed uses in the area are not fully known. There is irrigated agriculture along the river, but very little groundwater pumping seems to be occurring. The amount of land under cultivation, the amount of water diversion, the pollution, and the riparian and channel damage appear to have remained fairly constant in the past (G. Nabhan, University of Arizona, pers. comm., 1983).

B. Overutilization for commercial, recreational, scientific, or educational purposes. There is no indication that this species is overused for any of these purposes.

C. Disease or predation. Predation by introduced exotic fishes could prove disastrous for *Gila ditaenia*, leading to its extirpation in the United States. The introduction of exotic fishes, particularly game fish, into Sycamore Canyon would undoubtedly result in predation of the Sonora chub. Currently, predatory green sunfish occur in small numbers in the lower portions of Sycamore and Penasco Canyons; however, the extent of their impact is unknown. In 1983, mosquitofish were observed in an ephemeral pool in Penasco Canyon. The source of these fish was not determined and it is not known if they survived. The spread of mosquitofish into Penasco and Sycamore Canyons could be damaging

aggressive predator. Both green sunfish and mosquitofish have been shown to be contributing factors in the decline of other southwestern native fishes. The adverse impacts of parasites, introduced along with exotic fishes, on other species of *Gila* have been documented (James, 1983; Minckley *et al.*, 1981; Wilson *et al.*, 1966) and would probably occur with *Gila ditaenia*.

D. The inadequacy of existing regulatory mechanisms. The State of Arizona lists this species under Group 3 of the "Threatened Native Wildlife in Arizona." Group 3 includes "Species or subspecies whose continued presence in Arizona could be in jeopardy in the foreseeable future. Serious threats to the occupied habitats have been identified and populations (a) have declined or (b) are limited to a few individuals in few locations" (AGFC, 1982). No protection of the habitat is included in such designation and no management plan exists for this species. The State of Arizona requires a scientific collecting permit for taking individuals of the Sonora chub. In Mexico no protection exists for either the species or its habitat.

E. Other natural or manmade factors affecting its continued existence. Although unlikely, the United States population could be extirpated by natural phenomena (drought), if the water supply for Sycamore Creek should fail. The possibility of this occurring is increased by human activities which are likely to occur in the area. Watershed disturbances within the basin, such as poor grazing practices, mining, roads, or ORV use, can contribute to erosion, lowering water tables, and disturbed runoff patterns, and may affect the amount of flow in Yank's Spring, Sycamore Creek, and Penasco Canyon. Direct manipulation of water within the basin, such as stock tank construction and groundwater pumping, could also affect the flows.

In Mexico, Hendrickson (pers. comm., 1983; and in press) found that *Gila purpurea*, the Yaqui chub, which is native to the drainages of the Rios Yaqui, Matape, and Sonora, is now present in the Rio Magdalena along with *Gila ditaenia*. His collections indicate that hybridization may be occurring between the two species in at least one location. Spread of *Gila purpurea* in the Rio Magdalena could result in extensive losses of *Gila ditaenia* through hybridization.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule

preferred action is to list the Sonora chub as threatened with critical habitat. It was apparent that not listing this species would probably result in its becoming endangered in the foreseeable future because of:

- (1) The small size of the U.S. population and its habitat and its resultant vulnerability to damage from a single or multiple sources,
- (2) The potential for mineral development in the area, and
- (3) The uncertain status of the Mexican population, its lack of any legal protection, and increasing water demand in its range. However, the status of the United States population of *Gila ditaenia* is presently stable, and at least some populations exist in Mexico. The U.S. population currently receives some protection through State regulations and by management policies of the U.S. Forest Service. Therefore, endangered status seems inappropriate.

Critical Habitat

Section 3 of the Act defines "critical habitat" as (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographic area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4(a)(3) of the Act requires that critical habitat be designated to the maximum extent prudent and determinable concurrently with the determination that a species is endangered or threatened. Critical habitat is designated for *Gila ditaenia* to include the entire area where the species is known to occur in the United States. This consists of Sycamore Creek, starting from and including Yank's Spring, downstream to the International Border with Mexico, plus the lower 1.25 miles of Penasco Creek, and the lower .25 miles of an unnamed stream that enters Sycamore Creek from the west in the NW ¼ of Section 23, T.23S., R.11E. in Santa Cruz County, Arizona. This critical habitat includes a 25 foot wide riparian area along each side of Sycamore and Penasco Creeks. This riparian zone is essential to the maintenance of the creek ecosystems and the stream channels, and thus to the conservation of the species. The riparian zone around the Yank's Spring has been

designation because the spring is impounded in a concrete tank and does not have a riparian zone. No riparian zone is designated for the unnamed stream because this portion of critical habitat consists of bedrock pools that are relatively unaffected by the riparian zone. All of the designated area is located within the Coronado National Forest.

Yank's Spring, Sycamore Creek, and two of its tributaries were chosen for critical habitat designation for the Sonora chub because they presently support the only U.S. population of this species. The area provides all of the ecological, behavioral, and physiological requirements necessary for the survival of this chub. The remaining portion of the range is in Mexico. Critical habitat is not designated in areas outside U.S. jurisdiction (50 CFR 424.12(h)).

Section 4(b)(8) of the Act requires, for any proposed or final regulation that designates critical habitat, a brief description and evaluation of those activities (public and private) that may adversely modify such habitat or may be affected by such designation. Activities in Sycamore Canyon during times of intermittent flow, such as mining activities, could be detrimental to the critical habitat. Any activities that would deplete the flow or would significantly alter the natural flow regime in Yank's Spring, the unnamed tributary, or Sycamore or Penasco Creeks, such as excessive groundwater pumping, impoundment, or water diversion, would adversely impact the critical habitat. Any activities that would extensively alter the channel morphology of Sycamore or Penasco Creeks, Yank's Spring, or the unnamed tributary, such as mining, excessive sedimentation, impoundment, or riparian destruction, would adversely impact the critical habitat. Any activities that would significantly alter the water chemistry of Yank's Spring, Sycamore or Penasco Creeks, or the unnamed tributary, such as release of chemical or biological pollutants at a point source or by dispersed release, would adversely impact the critical habitat. Additionally, the introduction of exotic fish may prove detrimental to the Sonora chub's critical habitat due to predation and to competition for food and space. Any parasites associated with such introduction would also be detrimental. As no Federal activities are currently planned for this area, critical habitat designation is not expected to cause an impact in the near future. If, in the future, activities are planned, the critical habitat of the Sonora chub

would have to be considered in such planning.

Section 4(b)(2) of the Act requires the Service to consider economic and other impacts of designating a particular area as critical habitat. The Service has evaluated the proposed critical habitat designation for the Sonora chub, taking into consideration all additional comments received. The critical habitat, except Yank's Spring, is contained within a natural area and a wilderness area. Forest Service management of these areas is apparently compatible with the critical habitat designation. Livestock grazing is not expected to affect or be affected by the critical habitat designation since the steep topography of the critical habitat generally precludes grazing access. There are mining claims in the vicinity of the critical habitat; however, no mining activities are currently ongoing or planned within or in the vicinity of the critical habitat designation. Recreational activities in the vicinity of Yank's Spring are not expected to affect or be affected by the critical habitat designation because the spring is impounded in a concrete tank and is resistant to habitat damage. No information was brought forward on economic or other impacts which warranted adjusting the boundaries of the critical habitat designation. Additional biological information from the U.S. Forest Service, however, did warrant adjustment of the proposed critical habitat designation to include an additional 1.5 miles of tributary streams containing the Sonora chub. The additional area is entirely on U.S. Forest Service lands and no significant economic or other impacts are expected from the adjustment of the critical habitat designation.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages the results in conservation actions by other Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking and harm are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402 and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal activity may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

The only known United States population of the Sonora chub, and all critical habitat for the species, are located on the Coronado National Forest. Sycamore Canyon and the adjacent canyons containing critical habitat are fairly remote and approximately 1.5 miles of Sycamore Creek is included in a natural area and a wilderness area. Present management of these areas is compatible with the critical habitat designation. Therefore, apparently Federal activities are not expected to affect or be affected by the critical habitat designation.

The Act and its implementing regulations found at 50 CFR 17.21 and 17.31 set forth a series of general prohibitions and exceptions that apply to all threatened wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take, import or export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any listed species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to agents of the Service and State conservation agencies.

Permits may be issued to carry out otherwise prohibited activities involving threatened animal species under certain circumstances. Regulations governing permits are at 50 CFR 17.22, 17.23, and 17.32. Such permits are available for scientific purposes, to enhance the propagation or survival of the species, and/or for incidental take in connection with otherwise lawful activities. For threatened species, there are also permits for zoological exhibition, educational purposes, or special purposes consistent with the purposes of

the Act. In some instances, permits may be issued during a specified period of time to relieve undue economic hardship that would be suffered if such relief were not available.

The above discussion generally applies to threatened species of fish or wildlife. However, the Secretary has discretion under section 4(d) of the Act to issue special regulations for a threatened species that are necessary and advisable for its conservation. *Gila ditaenia* is threatened primarily by habitat disturbance or alteration, not by intentional, direct taking of the species or by commercialization. Given this fact and the fact that the State currently regulates direct taking of the species through the requirement of State collecting permits, the Service has concluded that the State's collection permit system is more than adequate to protect the species from excessive taking, so long as taking is limited to: educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Endangered Species Act. A separate Federal permit system is not required to address the current threats to the species. Therefore, a special rule is issued that allows take to occur for the above-stated purposes without the need for a Federal permit if a State collecting permit is obtained and all other State wildlife conservation laws and regulations are satisfied. The special rule also acknowledges the fact that incidental take of the species by State-licensed recreational fishermen is not a significant threat to this species. In fact, angling is an unlikely method of capture of the species. Therefore, under this special rule such incidental take would not be a violation of the Act if the fishermen immediately returned the individual fish taken to its habitat. Any activities involving the taking of this species not otherwise enumerated in the special rule are prohibited. Without this special rule, all of the prohibitions of 50 CFR 17.31 would apply. This special rule will allow for more efficient management of the species, and thus will enhance the conservation of the species. For these reasons, the Service concludes that this regulation is necessary and advisable for the conservation of the Sonora chub.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need

not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the *Federal Register* on October 25, 1983 (48 FR 49244).

Regulatory Flexibility Act and Executive Order 12291

The Department of the Interior has determined that designation of critical habitat for this species will not constitute a major action under Executive Order 12291 and certifies that this designation will not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). No significant economic or other impacts are expected to result from the critical habitat designation. This conclusion is based on Forest Service management of recreational and other activities within the Coronado National Forest, the absence of any mining activities or plans to mine the claims within or in the vicinity of the critical habitat, and the unquantifiable benefits that may result from the critical habitat designation. In addition, no direct costs, enforcement costs, or information collection or recordkeeping requirements are imposed on small entities by this designation of critical habitat. These findings are based on a Determination of Effects that is available at the Region 2 Office of Endangered Species, U.S. Fish and Wildlife Service (See **ADDRESSES**).

Literature Cited

- Arizona Game and Fish Commission. 1982. Threatened Native Wildlife in Arizona. Arizona Game and Fish Department Publication. 12 pp.
- Bell, G. 1984. Sonora chub, Sycamore Canyon, Nogales RD. U.S. Forest Service, Coronado N.F., inter-office memorandum. 13 pp.
- Brooks, J.E. 1982. Sycamore Creek survey—*Gila ditaenia*. Arizona Game and Fish Department inter-office memorandum. 2 pp.
- Goodding, L.N. 1961. Why Sycamore Canyon in Santa Cruz County should be preserved as a nature sanctuary or natural area. *Journal of the Arizona Academy of Science* 1:113-115.
- Hale, S.F. 1983. Status report for *Rana tarahumarae*. Boulenger. U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque. New Mexico. 99 pp.
- Hendrickson, D.A. In Press. Distribution Records of Native and Exotic Fishes in Pacific Drainage of Northern Mexico. *Journal of the Arizona-Nevada Academy of Sciences*.
- James, A.E. 1983. *Learnia*. (copepod) infections of three native fishes from the Salt River basin, Arizona. Unpublished M.S. Thesis, Arizona State University, Tempe, Arizona.
- Miller, L. 1949. Field notes on the minnow, *Gila ditaenia* in southern Arizona. *Copeia* 1949: 148-150.
- Miller, R.G. 1945. A new cyprinid fish from southern Arizona and Sonora, Mexico, with the description of a new subgenus of *Gila* and a review of related species. *Copeia* 1945: 104-110.
- Minckley, C.O. 1983. Status report on *Gila ditaenia* U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque. New Mexico. 14 pp.
- Minckley, C.O., S.W. Carothers, J.W. Jordan, and H.D. Usher. 1981. Observations on the humpback chub, *Gila cypha*, within the Colorado and Little Colorado Rivers, Grand Canyon National Park, Arizona. Second Annual Conference on Scientific Research in National Parks. National Park Service Transactions and Proceedings Series. November 1979.
- Minckley, W.L. 1973. Fishes of Arizona. Sims Printing Co. Phoenix, Arizona. 293 pp.
- United States Department of Agriculture. 1982. Draft Environmental Impact Statement, Proposed Coronado National Forest Plan. Forest Service, Southwestern Region. 173 pp.
- Wilson, B.L., J.E. Deacon and W.G. Bradley. 1966. Parasitism in the fishes of the Moapa River, Clark County, Nevada. Desert Research Inst. Preprint series. No. 18. University of Nevada, Las Vegas.

Authors

The primary authors of this final rule are S.E. Stefferud and A.M. Shull, Endangered Species staff, U.S. Fish and Wildlife Service, Albuquerque, New Mexico 87103 (505/766-3972).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulations Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.11(h) by adding the following, in alphabetical order under "Fishes," to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
FISHES							
Chub, Sonora	<i>Gila ditaenia</i>	U.S.A. (AZ), Mexico	Entire	T	227	17.95(e)	17.44(o)

3. Add the following paragraph (o) as a special rule to § 17.44.

§ 17.44 Special rules—fishes.

(o) Sonora chub, *Gila ditaenia*.

(1) No person shall take the species, except in accordance with applicable State fish and wildlife conservation laws and regulations in the following instances: (i) For educational purposes, scientific purposes, the enhancement of propagation or survival of the species, zoological exhibition, and other conservation purposes consistent with the Act; or, (ii) incidental to State-permitted recreational fishing activities, provided that the individual fish taken is immediately returned to its habitat.

(2) Any violation of applicable State fish and wildlife conservation laws or regulations with respect to the taking of this species will also be a violation of the Endangered Species Act.

(3) No person shall possess, sell, deliver, carry, transport, ship, import, or export, by any means whatsoever, any such species taken in violation of these regulations or in violation of applicable State fish and wildlife conservation laws or regulations.

(4) It is unlawful for any person to attempt to commit, solicit another to commit, or cause to be committed, any offense defined in paragraphs (o) (1) through (3) of this section.

4. Amend § 17.95(e) by adding the critical habitat of the Sonora chub as follows (the position of the following critical habitat entry under § 17.95(e) will follow the same sequence as the species occurs in 17.11):

§ 17.95 Critical habitat—fish and wildlife.
(e) * * *

Sonora Chub (*Gila ditaenia*)

Arizona, Santa Cruz County. An area of land and water in the Coronado National Forest, consisting of the following:

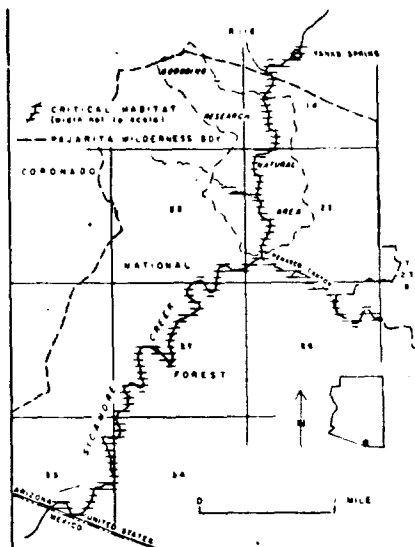
1. Sycamore Creek, and a riparian zone 25 feet wide along each side of the creek, from Yank's Spring downstream approximately 5 stream miles to the International Border with

Mexico within sections 14, 22, 23, 27, 33, and 34, T. 23 S.; R. 11 E.

2. Yank's Spring in the SE¼ of the NW¼ of sec. 14, T. 23 S.; R. 11 E.

3. Penasco Creek, including a riparian zone 25 feet wide along each side of the creek, from its confluence with Sycamore Creek (SW¼ of the SW¼ of sec. 23, T. 23 S.; R. 11 E.) upstream approximately 1¼ miles to the east boundary of sec. 26, T. 23 S.;

4. An unnamed tributary to Sycamore Creek, from its confluence with Sycamore Creek (SW¼ of the NW¼ of sec. 23, T. 23 S.; R. 11 E.) upstream approximately ¼ mile to the west boundary of the NE¼ of the SE¼ of the NE¼ sec. 22, T. 23 S.; R. 11 E.



Known primary constituent elements include clean permanent water with pools and intermediate riffle areas and/or intermittent pools maintained by bedrock or by subsurface flow in areas shaded by canyon walls.

Dated: March 25, 1986.

P. Daniel Smith,

Acting Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86-9669 Filed 4-29-86; 8:45 am]

BILLING CODE 4310-55-M